



Department of Electrical Engineering

Academic Year 2022-23

FDP on “MATLAB and Simulink Basics for Hardware Projects”




Objective	<p>To train researchers with follow content:</p> <ol style="list-style-type: none"> 1. Basics of MATLAB coding and Simulink. 2. Arduino-interfacing with MATLAB and application to multilevel inverters. 3. Robotic vision and MATLAB for mobile robot application 4. Zigbee with MATLAB for wireless data logging 5. IOT development board and MATLAB for tele operated robotic arm 6. Drone control through MATLAB Interface 7. Brain Computer Interface (BCI) with MATLAB using Gtech EEG Headset 8. Basics of Raspberry Pi, IOT application of MATLAB Raspberry Pi interface 9. dSPACE MATLAB interface for ANN and optimization based application 			
Organizer	Department of Electrical Engineering SVKM's Institute of Technology, Dhule			
Participating Class & Division	Faculty from Electrical Engineering of SVKM's IOT, Dhule.			
Date	01/08/2022 to 05/08/2022 (One Week)			
Time	9:30 AM to 4:00 PM			
Venue	Online – Microsoft Teams			
Coordinator/s	<p>Mr. Sandeep Ushkewar</p> <p>Organizing Team: Mr. Sandeep Ushkewar, Mr. Gaurav Patil, Dr. Namra Joshi, Mr. Jagdish More, Ms. Farha Naz, Mr. T. N. Shubham, Mr. Shahid Akhtar, Mr. Rahul Thakur, Mr. Jayesh Patil.</p>			
Name of Speaker with Designation	<ol style="list-style-type: none"> 1. Dr. Shimi S.L, Assistant Professor, NITTTR, Chandigarh 2. Mr. Sandeep Gupta, Research Scholar, IIT Kanpur 3. Mrs. Swathi Singh, Research Scholar, IIT Kanpur 4. Jagriti Saini, Founder Eternal RESTEM, Sunder Nagar, HP 5. Ajay Godara, Director, Enovation Lab, LLP, Chandigarh 			
Brief report on activity	<ul style="list-style-type: none"> • The FDP was organized to train researchers with the latest technologies such as, IOT, dSPACE, Arduino, Zigbee, Raspberry Pi and their interface with MATLAB. • The FDP was conducted in below sequence. 			
	DAY & DATE	Live Session - 1 9.30 AM to 11.00 AM	Live Session - 2 11.30 AM to 1.00 PM (IST)	Live Session - 3 2.30 PM to 4.00 PM (IST)
	Monday 01/08/2022	MATLAB / SIMULINK Basics for Hardware interface	Arduino basics and Simulink Interface	Arduino interfacing with MATLAB and application to multilevel inverter
	Tuesday	Robotic vision and MATLAB for mobile	ZigBee with MATLAB for	IoT development board and MATLAB



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Department of Electrical Engineering

	02/08/2022	robot application	wireless data logging	for tele operated robotic arm
	Wednesday 03/08/2022	Drone control through MATLAB interface	Brain computer interface(BCI) with MATLAB using Gtech EEG headset	Indoor Air Pollution Monitoring and Assessment using IoT and ML
	Thursday 04/08/2022	Arduino Due based project with MATLAB interface	Basics of Raspberry Pi	IoT application of MATLAB Raspberry Pi interface
	Friday 05/08/2022	IoT application with Arduino using MATLAB and thing speak cloud	MATLAB with dSPACE Interface – Solar MPPT tracking Project	STC Valediction, Feedback and Evaluation
Duration of Program	One Week			
Date:				
 Mr. Sandeep Ushkewar Coordinator	 Dr. Vishal Moyal Department Coordinator	 Dr. Nilesh Salunke Principal & Patron		

Principal
SVKM's Institute of Technology, Dhule

Attached:-

1. Details of the Event
2. Event Memories/Pictures
3. List of Participants
4. Sample Certificate

1. Details of the Event

Name of Program: FDP on “MATLAB and Simulink Basics for Hardware Projects”.

Objectives: To train researchers with follow content:

1. Basics of MATLAB coding and Simulink.
2. Arduino interfacing with MATLAB and application to multilevel inverters
3. Robotic vision and MATLAB for mobile robot application
4. Zigbee with MATLAB for wireless data logging
5. IOT development board and MATLAB for tele operated robotic arm
6. Drone control through MATLAB Interface
7. Brain Computer Interface (BCI) with MATLAB using Gtech EEG Headset
8. Basics of Raspberry Pi, IOT application of MATLAB Raspberry Pi interface
9. dSPACE MATLAB interface for ANN and optimization based application

Dates and duration : 01/08/2022 to 05/08/2022 (One Week)

Event Coordinator: Mr. Sandeep Ushkewar

Convener: Dr. Vishal Moyal.

Patron: Dr. Nilesh Salunke

Organizing Team: Mr. Sandeep Ushkewar, Mr. Gaurav Patil, Dr. Namra Joshi, Mr. Jagdish More, Ms. Farha Naz, Mr. T. N. Shubham, Mr. Shahid Akhtar, Mr. Rahul Thakur, Mr. Jayesh Patil.

Participants: Faculty from Electrical Engineering Department (Only from SVKM’s IOT, Dhule)

Name and details of the speakers:

1. Dr. Shimi S.L, Assistant Professor, NITTTR, Chandigarh
2. Mr. Sandeep Gupta, Research Scholar, IIT Kanpur
3. Mrs. Swathi Singh, Research Scholar, IIT Kanpur
4. Jagriti Saini, Founder Eternal RESTEM, Sunder Nagar, HP
5. Ajay Godara, Director, Enovation Lab, LLP, Chandigarh

2. Event Memories/ Pictures



3. List of Participants

Attendance

Name of the Course: MATLAB and SIMULINK Basics for Hardware

Dates: 01.08.2022 to 05.08.2022

Venue (Nodal Centre) : SVKM's Institute of Technology, Dhule.

Sr. No.	Name of the Participant	Name of the Institute	01-08-2022			02-08-2022			03-08-2022			04-08-2022			05-08-2022		
			09.30 am-11.00 am	11.30am-1.00pm	2.30pm-4.00pm	09.30 am-11.00 am	11.30am-1.00pm	2.30pm-4.00pm	09.30 am-11.00 am	11.30am-1.00pm	2.30pm-4.00pm	09.30 am-11.00 am	11.30am-1.00pm	2.30pm-4.00pm	09.30 am-11.00 am	11.30am-1.00pm	2.30pm-4.00pm
1	Dr. Vishal Moyal	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
2	Sandeep Sunil Ushkewar	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
3	Darshankumar Patel	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
4	Dhiraj Keshavrao Bhandarkar	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
5	Bhushan Chandrakant Behede	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
6	Kulkarni Mayuri Divakar	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
7	Shahid Akhtar Iqbal Ahmed	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
8	Gaurav Baludas Patil	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
9	Dr. Namra Joshi	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
10	Akshay Bharat Jain	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
11	Jayesh Nana Patil	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	
12	Jagdish Laxman More	SVKM's Institute of Technology, Dhule.	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	Present	

Vishal
Local Course Coordinator
Dr. Vishal Moyal

Sandeep
Local Course Co-ordinator
Mr. Sandeep Ushkewar

4. Sample Certificate

	Certificate No: ICT-6954/22	
National Institute of Technical Teachers Training and Research Chandigarh		
MINISTRY OF HUMAN RESOURCE DEVELOPMENT, GOVERNMENT OF INDIA		
Certificate		
<i>This is to certify that</i>		
SANDEEP SUNIL USHKEWAR		
SVKMS INSTITUTE OF TECHNOLOGY DHULE, DHULE MAHARASHTRA		
<i>Participated in the AICTE Recognized Faculty Development Programme</i>		
on		
MATLAB and SIMULINK basics for Hardware Projects		
<i>Conducted by</i>		
Electrical Engineering Department		
from		
01/08/2022 to 05/08/2022 (One Week)		
at		
SVKMs Institute of Technology, Dhule Maharashtra		
	 Coordinator	 Director